in which the calcium ion selective electrode member comprises an electro-insulating support, a first pair of electrode units each which comprises a silver layer and a silver halide layer, the pair of electrodes being electrically separated from each other, an electrolyte layer, and a calcium ion selective membrane, and

in which the hydrogen ion selective electrode member comprises an electro-insulating support, a second pair of electrode units each of which comprises a silver layer and a silver halide layer, and which are electrically separated from each other, an electrolyte layer, and a hydrogen ion selective membrane;

(2) an electro-insulating member having two openings in which one opening is provided for introducing a sample liquid into one electrode of the calcium ion selective electrode of the calcium ion selective electrode member and one electrode of the hydrogen ion selective electrode member and another opening is provided for introducing a reference liquid into the composite electrode;

(3) a pair of distributing members in which one distributing member distributes the introduced sample liquid to the ion selective membrane of each ion selective electrode member at a site corresponding to one electrode unit and in which another distributing member distributes the introduced reference liquid to the ion selective membrane of each ion selective electrode member at a site corresponding to another electrode unit; and

B5 (4) a bridge member which is provided on the electro -insulating member to bridge the two openings of the electro-insulating member so as to electrically connect the introduced sample liquid and the introduced reference liquid;

which is characterized in that the calcium ion selective membrane has a thickness of 5 to 30 gym, and the hydrogen ion selective membrane contains tri-n-dodecylamine and trisethylhexyl trimellitate.

2. (amended) The composite ion selective electrode of claim 1, wherein the calcium ion selective membrane contains calcium di[4-(1,1,3,3-tetramethylbutyl)phenyl] phosphate.

3. (amended) The composite ion selective electrode of claim 1, wherein the calcium ion selective membrane comprises a vinyl chloride-vinyl acetate copolymer, dioctylphenyl phosphonate, and calcium di[4-(1,1,3,3-tetramethylbutyl)phenyl] phosphate.

---

8. (amended) A method for determining a standardized calcium ion concentration in

B6 a sample blood, which comprises the steps of:

spotting a sample blood and a reference liquid onto openings of the electro-insulating member of the composite ion selective electrode of claim 1,

measuring potentiometrically a calcium ion concentration and a hydrogen ion concentration in the sample blood; and incorporating the measured calcium ion concentration and he measured hydrogen ion concentration into the following the equation to obtain a value of Log (standardized iCa):

Log (standardized iCa) =

Log (iCa at pH) – 0.22 x (7.4 – pH)

B6

in which iCa is a calcium ion concentration and pH is a hydrogen ion concentration.

---

10. (amended) The calcium ion selective electrode of claim 9, wherein the calcium ion selective membrane contains calcium di[4-(1,1,3,3-tetramethylbutyl)phenyl] phosphate.

11. (amended) The calcium ion selective electrode of claim 10, wherein the calcium ion selective membrane comprises a vinyl chloride-vinyl acetate copolymer, dioctylphenyl phosphonate, and calcium di[4-(1,1,3,3-tetramethylbutyl)10 phenyl] phosphate.

---

15. (amended) A hydrogen ion selective electrode comprising

(1) a hydrogen ion selective electrode member which comprises an electro-insulating support, a pair of electrode units each of which comprises a silver layer and a silver halide layer, the pair of electrodes being electrically separated from each other, an electrolyte layer, and a hydrogen ion selective membrane;

(2) an electro-insulating member having two openings which is provided on the hydrogen ion selective electrode member and in which one opening is provided for introducing a sample liquid into the another electrode of the calcium ion selective electrode member and another electrode of the hydrogen ion selective electrode member and another opening is provided for introducing a reference liquid into the another electrode of the calcium ion selective electrode member and another electrode of the hydrogen ion selective electrode member; and

B7

(3) a bridge member which is provided on the electro-insulating member to bridge the two openings of the electro-insulating member so as to electrically connect the introduced sample liquid and the introduced reference liquid;

which is characterized in that the hydrogen ion selective membrane contains tri-n-dodecylamine and trisethylhexyl trimellitate.

16. (amended) The hydrogen ion selective electrode of claim 15, wherein the hydrogen ion selective membrane further contains potassium tetrakis (p-chlorophenylborate) and a vinyl chloride-vinyl acetate copolymer.

---

18. (amended) The hydrogen ion selective electrode of claim 15, wherein the electrolyte layer comprises sodium chloride.